Air-Cooled Heat Exchanger Specification Sheet

Company:National Iranian Gas Company

Location: South Pars Gas field

Service of Unit:Export Gas Compressor Recycle Cooler **Our Reference:SEC-PJ-080**

Item No.: SPY-2-(1,2,3,4)106 **Your Reference:602-106-ME-DT-002-D01**

Date: 30/05/2005 **Rev No.: 0** **Case:50% Flow Recycle**

Size & Type	13809.6 / 14478	Type	Induced	Number of Bays	3		
Surf/Unit-Finned Tube	29791.8	**m2**		Bare Tube	1384.1	**m2**	
Heat exchanged	5391.474	**kW**		MTD, Eff	7.8	**C**	
Transfer rate	23.2	Bare, Service	499.4	Clean	657.2	**W/(m2*K)**	

PERFORMANCE DATA - TUBE SIDE

Fluid Circulated	DRY SOUR HC GAS					In/Out	
Total Fluid Entering	**kg/s**	203.7506		Density, Liq	**kg/m3**	/	
		In/Out		Density, Vap	**kg/m3**	45.2 / 47.6	
Temperature	**C**	65.67 / 55		Specific Heat, Liq	**kJ/(kg*K)**	/	
Liquid	**kg/s**	/		Specific Heat, Vap	**kJ/(kg*K)**	2.48 / 2.48	
Vapor	**kg/s**	733502 / 733502		Therm. Cond, Liq	**W/(m*K)**	/	
Noncondensable	**kg/s**	/		Therm. Cond, Vap		0.043 / 0.041	
Steam	**kg/s**	/		Freeze Point	**C**		
Water	**kg/s**	/		Bubble / Dew point		/	
Molecular wt, Vap		/		Latent heat	**kJ/kg**		
Molecular wt, NC				Inlet pressure (abs)	**bar**	63.5	
Viscosity, Liq	**mPa*s**	/		Pres Drop, Allow/Calc		1 / 0.195	
Viscosity, Vap		0.014 / 0.014		Fouling Resistance	**m2*K/W**	0.00018	

PERFORMANCE DATA - AIR SIDE

Air Quantity, Total	2110097	**kg/h**		Altitude	60	**m**	
Air Quantity/Fan	111.542	**m3/s**		Temperature In	48	**C**	
Static Pressure	19.62	**mmH2O**		Temperature Out	55	**C**	
Face Velocity	3.57 **m/s**	Bundle velocity	6.1 **kg/s/m2**	Design Ambient	5	**C**	

DESIGN-MATERIALS-CONSTRUCTION

Design pressure	82 **bar**	Test Pressure		Design temperature	160	**C**	
TUBE BUNDLE		**Header**		**Tube**			
Size	13809.6	Type	Plug	Material	SA-334 Grd 6		
Number/bay	2	Material	SA-516 Gr. 70	Specifications	Seamless		
Tube Rows	6	Passes	1	OD	25.4	Min Thk.	2.11 **mm**
Arrangement		Plug Mat.	SA-350 Lf2	No./Bun	219	Lng	13.2 **m**
Bundles	2 par 1 ser	Gasket Mat.	DMJK	Pitch	63.5 / 54.99		Staggered
Bays	3 par 1 ser	Corr. Allow.	3 **mm**	**Fin**			
Bundle frame		Inlet Nozzle	2 8 **in**	Type	Extruded		
MISCELLANEOUS		Outlet Nozzle	2 8 **in**	Material	Aluminum		
Struct. Mount.		Special Nozzles		OD	57.15	Tks 0.4	**mm**
Surf.Prep		Rating	600 ANSI	No.	394 #/m	Des Temp	**C**
Louvers		TI	PI	Code	ASME - American		
Vibration Switches		Chem Cleaning		Stamp	Specs	API 661	

MECHANICAL EQUIPMENT

Fan,Mfr., Model		Driver, Type	T-belt	Speed Reducer, Type			
No./Bay	2 RPM	Mfr.		Mfr.&ModelMfr.&Model			
Dia. **ft**	14 Blade(s)	No./Bay		No./Bay			
Pitch	Angle	RPM		Rating			
Blade(s)	Hub	Enclosure		Ratio			
hp/Fan	36.9 Min Amb	V/Phase/Hz		Support			

Control Action on Air Failure-				Louvers			
Degree Control of Outlet Process Temperature							
Recirculation				Steam Coil	No		
Plot Area	**m2**	Drawing No.		Wt.Bundle	18472.3	Wt.Bay	42222.7 **kg**

Notes:

FOR SELECTED FAN SEE RELATIVE DOCUMENTS

SELECTED MECHANICAL EQUIPMENT ARE ONLY A SUGGESTION, IT MAY CHANGE LATER ACCORDING TO THE SELECTED SUPPLIER